

I CLAIM:

1 1. A method for conducting a transaction over a computer network
2 between a consumer and a merchant involving a payment card issued by an issuer
3 institution to the consumer, wherein the computer network includes at least three
4 computers connected thereto, a consumer computer operated by or on behalf of the
5 consumer, a merchant computer operated by or on behalf of the merchant, and a remote
6 wallet server that provides functionality for the consumer computer to conduct
7 transactions over the computer network, the method comprising:
8 receiving a request by the remote wallet server from the consumer
9 computer for conducting a payment function with the merchant computer;
10 conducting a transaction by the remote wallet server with the
11 merchant computer in response to the request by the consumer computer in a format
12 substantially compliant with a chip card electronic commerce protocol or specification,
13 regardless of whether or not the payment card of the consumer involved in the transaction
14 is a chip card.

1 2. The method of claim 1, wherein the remote wallet server and the
2 issuer institution have a shared secret data object, and the method further comprises the
3 steps of:
4 generating a cryptogram by the remote wallet server based on the
5 shared secret data object between the remote wallet server and the issuer institution; and
6 sending payment-related information and the cryptogram by the

7 remote wallet server to the merchant computer in response to the request by the consumer
8 computer.

1 3. A remote wallet server for facilitating a transaction over a
2 computer network between a consumer and a merchant, wherein the transaction involves
3 a payment card issued by an issuer institution to the consumer, and wherein the computer
4 network includes at least three computers connected thereto, a consumer computer
5 operated by or on behalf of the consumer, a merchant computer operated by or on behalf
6 of the merchant, and the remote wallet server; the remote wallet server comprising:
7 a microprocessor unit;
8 a memory unit coupled to the microprocessor unit;
9 means for conducting a transaction with the merchant computer in
10 response to a request for such a transaction by the consumer computer in a format
11 substantially compliant with a chip card electronic commerce protocol or specification,
12 regardless of whether or not the payment card of the consumer involved in the transaction
13 is a chip card.

1 4. The remote wallet server of claim 3, further comprising:
2 a storage unit having stored therein a secret data object that is
3 shared with the issuer institution;
4 means for generating a cryptogram by the remote wallet server
5 based on the secret data that is shared between the remote wallet server and the issuer
6 institution; and

7 application code stored in the memory unit for sending payment-
8 related information and the cryptogram to the merchant computer in response to the
9 request by the consumer computer to conduct a transaction with the merchant computer.

1 5. The remote wallet server of claim 4, wherein the storage unit and
2 the means for generating a cryptogram are contained in a tamper-resistant security
3 module.

1 6. A method for conducting a transaction over a computer network
2 between a consumer and a merchant involving a payment card issued by an issuer
3 institution to the consumer, wherein the computer network includes at least three
4 computers connected thereto, a consumer computer operated by or on behalf of the
5 consumer, a merchant computer operated by or on behalf of the merchant, and a remote
6 wallet server that provides functionality for the consumer computer to conduct
7 transactions over the computer network, wherein the remote wallet server and the issuer
8 institution have a shared secret data object, the method comprising:
9 receiving a request by the remote wallet server from the consumer
10 computer for conducting a payment function with the merchant computer;
11 generating a cryptogram by the remote wallet server based on the
12 shared secret data object between the remote wallet server and the issuer institution; and
13 sending payment-related information and the cryptogram by the
14 remote wallet server to the merchant computer in response to the request by the consumer
15 computer.

1 7. The method of claim 6, wherein the payment-related information
2 and the cryptogram are transmitted in a format substantially compliant with a chip card
3 electronic commerce protocol or specification.

1 8. A remote wallet server for facilitating a transaction over a
2 computer network between a consumer and a merchant involving a payment card issued
3 by an issuer institution to the consumer, wherein the computer network includes at least
4 three computers connected thereto, a consumer computer operated by or on behalf of the
5 consumer, a merchant computer operated by or on behalf of the merchant, and the remote
6 wallet server, comprising:

7 a microprocessor unit;
8 a memory unit coupled to the microprocessor unit;
9 a storage unit having stored therein a secret data object that is
10 shared with the issuer institution;

11 means for generating a cryptogram by the remote wallet server
12 based on the secret data that is shared between the remote wallet server and the issuer
13 institution; and

14 application code stored in the memory unit for sending payment-
15 related information and the cryptogram to the merchant computer in response to a request
16 by the consumer computer to conduct a payment function with the merchant computer.

1 9. The remote wallet server of claim 8, wherein the application code
2 includes means for transmitting the payment-related information and the cryptogram in a

